

Practical Things You Should Know about Wound Healing and Vacuum-Assisted Closure Management

Sir:

We have been taking care of complicated wounds and have been gaining more experience in vacuum-assisted closure and its modalities in recent years. We have read the CME article entitled “Practical Things You Should Know about Wound Healing and Vacuum-Assisted Closure Management” by Singh et al. with great interest.¹ The article comprehensively summarized innovations in wound care, especially in vacuum-assisted closure treatment. We would like to emphasize some points that were not mentioned in detail in the article about closed incisional negative-pressure wound treatment.

The authors listed the areas for incisional negative-pressure wound treatment use as sternal, breast, hip/knee, cesarean delivery, and groin. However, abdominopelvic incisions and postbariatric dermolipectomy incisions that are high risk for problematic healing were not included in the article. The authors cited a study about cesarean incisions in obese patients; however, laparotomy incisions constitute an important part of abdominal wound complications in addition to just cesarean delivery.^{2,3} The underlying mechanism for wound separation in abdominal incisions is the tendency for abdominal fat necrosis because of diminished circulation of the superficial fat layer in obese patients that is more aberrant to the duration of intraoperative traction such as gynecologic oncology cases.³ Incisional negative-pressure wound treatment collects the necrotic fat debris and prevents sutures from sloughing while decreasing the tension and increasing the blood flow in the wound edges.⁴ The authors mentioned lower surgical-site infection rates in incisional negative-pressure wound treatment use in the article. Our experience is similar to that of the authors, but we would like to underline the ability of incisional negative-pressure wound treatment to keep the incision site sterile in difficult regions such as incisions close to the genitourinary region and incisions close to fecal diversion colostomies/ileostomies. In our clinical practice, we isolate abdominal incisions with incisional negative-pressure wound treatment close to colostomies/ileostomies to prevent fecal contamination, as shown in Figure 1. The authors reported lower rates of hematoma/seroma and increased lymphatic circulation as advantages of incisional negative-pressure wound treatment. We experienced that postbariatric patients can benefit from the advantages of incisional negative-pressure wound treatment. These patient groups are at high risk for wound breakdown because of lower dermal thickness and high risk for seroma and hematoma formation.⁵ We encountered earlier removal of drains and lower hematoma/seroma-related complications, especially in brachial dermolipectomy cases. In summary, indications for incisional negative-pressure

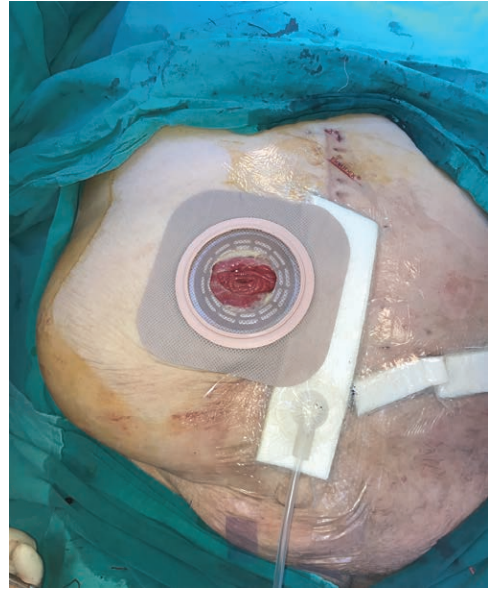


Fig. 1. The incision site can be isolated from fecal contamination from ileostomies or colostomies with incisional negative-pressure wound treatment dressing.

wound treatment are not restricted to reconstructive procedures, and indications can be varied depending on need. We would like to thank the authors once again for their comprehensive review and for enlightening us about recent innovations that will find more indications and space in the near future.

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DISCLOSURE

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Reply: Practical Things You Should Know about Wound Healing and Vacuum-Assisted Closure Management

Sir:

We thank Ozkan et al. for the kind letter regarding our CME review article.¹ We certainly share their enthusiasm for advanced wound care and appreciate their thoughtful comments about closed-incision negative-pressure therapy. We emphatically agree that closed-incision negative-pressure therapy is a remarkable technology with multiple clinical benefits. It is especially interesting that Ozkan et al. have similarly found a significant decrease in their surgical-site infections. The exact mechanism for this widely observed decrease in surgical-site infection is still not completely known, but we suspect it is attributable to enhanced perfusion in the area around the incision,² and as noted by Ozkan et al., closed-incision negative-pressure therapy dressings certainly do keep the surgical

site cleaner for longer compared to traditional gauze, which may also help reduce infections.³ Like Ozkan et al., we have also found earlier drain removal in our patients treated with closed-incision negative-pressure therapy; this finding has been particularly true in our postmastectomy reconstruction patients treated with the latest advance in negative-pressure therapy, the Prevena Restor Bella•Form Incision Management System (3M+KCI, San Antonio, Texas). This novel dressing covers not only the incision but also the surrounding soft tissues with negative-pressure foam (Fig. 1). We have recently submitted our early experience with this breast-specific closed incision and surrounding tissue negative-pressure therapy for peer review. Again, we thank Ozkan et al. for taking interest in our CME review article.

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Fig 1. Intraoperative view showing immediate prepectoral direct-to-implant reconstruction after nipple-sparing mastectomy (left). Postoperative view showing application of the Prevena Restor Bella•Form Incision Management System, which is covering the entire breast reconstruction (center). Follow-up view in the clinic demonstrates well-healed breast reconstruction without complication (right).